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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MAIS, MARK A	

ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/834,974	BERETZKI	
	Examiner	Art Unit	
	Mark A. Mais	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-15 were presented for examination.

Claim Objections

2. Claim 1 is objected to because of the following informalities: It recites the claim limitation "filed load". Examiner has interpreted this to be "file loaded." Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-7 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanekar et al. (USP 6,751,191).

5. With regard to claim 1, Kanekar et al. discloses a network router **[fig. 3, master router, R-1]** characterized in that it includes at least one generic router **[fig. 3, slave router R-2]** *configured to route data between input devices and output devices* **[both routers are capable of executing routing between inputs and outputs, with the slave router providing a load sharing function and redundancy function, col. 2, lines 6-10]**,

a configuration file including the parameters of a given set of routings between said input *devices* and output *devices* **[the configuration file is updated and shared between the master to the slave, col. 4, lines 25-27]**, *a memory unit* **[it is inherent that a memory unit is used to store a routing table as well as a configuration file (non-volatile RAM, col. 7, line 3)]** *further configured to store* a routing table **[both a layer 2 database and a layer 3 routing table, col. 2, lines 56-62]**, *wherein the generic router is further configured to load* a subset of routings from said configuration file into said routing table *and* to execute the routings between said input *device*s and output *devices* according to the configuration *file loaded* into the routing table **[the redundancy that Slave R-2 provides allows the system to operate 'seamlessly' when master R-1 fails such that all packet routing can be executed, col. 2, lines col. 2, line 49 to col. 3, line 4]**.

6. With regard to claim 15, Kanekar et al. discloses routing data between input devices and output devices **[both routers are capable of executing routing between inputs and outputs, with the slave router providing a load sharing function and redundancy function, col. 2, lines 6-10]**,

storing a configuration file including parameters of a given set of routings between said input devices and output devices **[the configuration file is updated and shared between the master to the slave, col. 4, lines 25-27]**;

loading a subset of routings from the configuration file into a routing table; and executing the routings between said input devices and output devices according to the configuration file loaded into said routing table **[the redundancy that Slave R-2 provides allows the system to operate 'seamlessly' when master R-1 fails such that all packet routing can be executed, col. 2, lines col. 2, line 49 to col. 3, line 4]**.

7. With regard to claim 2, Kanekar et al. discloses that the subset of routings is specific to a given need **[i.e., providing a load sharing function and a redundancy function, col. 2, lines 6-10]** .

8. With regard to claim 3, Kanekar et al. discloses that when the generic router *is configured to activate said input devices and said output devices* dedicated to an application *at startup* and *to load* the routing table *at start-up* **[when master R-1 fails, slave R-2 "starts up" by taking over the layer 2 table for layer 2 packets, col. 2, lines 56-67]**.

9. With regard to claim 4, Kanekar et al. discloses, according to any of claims 1-3, wherein data processing functions are associated with said *subset of* routings, these functions being defined in said configuration file and loaded into the routing table **[the communication system counts on the routers, whether the master R-1 or the slave R-2, to be reliable, and therefore, there must be a redundancy, in order to prevent any communication 'outage', further exasperated by at least some switchover time, col. 1, lines 51-61. So, whether the master R-1 is performing layer 2 and 3 routing, or the slave R-2 is performing redundancy calculations/updates, the shared configuration table is constantly updated, as is the routing table, col. 4, lines 25-27]**.

10. With regard to claim to 5, Kanekar et al. discloses that the message received by a given input *device* is processed by a *first* function, associated with *the* input *device*, then routed according to said routing table to a designated output *device*, then processed by a *second* function associated with *the* output *device* **[fig. 5, as a bridge, the master R-1, uses the switch engine 510 on a given input for handling layer 2 protocol (spanning tree), and then controls the hardware via a given output using the forwarding engine functionality 514 (and the slave R-2, provides mirroring functionality), col. 7, lines 35-48]**.

11. With regard to claim 6, Kanekar et al. discloses

an operating system **[each router inherently has a router OS; i.e., Cisco's IOS, col. 17, line 23-26]**;

input and output software layers **[layer 2 "spanning tree" protocol and layer 3 "routing tables", col. 7, line 49 to col. 8, line 8]** ; and

an intermediate software layer providing a link between said operating system, said input and output layers and said generic router **[routing processors run the routing protocols, switching processors run the switch protocols, the routers communicate via HSRP, and either router operates as the master, or detects a fault and the standby slave becomes the master, col. 7, lines 18-48]**.

12. With regard to claim 7, Kanekar et al. discloses that the input devices and output devices are connected to one of a serial X.25 link, BSC link, asynchronous link, HDLC link, UDP Ethernet link, and TCP Ethernet link **[col. 17, lines 40-46]**.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanekar et al. as applied to claims 1-7 and 15 above, and further in view of Chao et al. (USP 6,081,507).

15. With regard to claim 8, Kanekar et al. does not specifically disclose that the messages received by the generic router are routed in a given sequence and rejects recently received messages until the overflow situation is resolved, in order that the messages are routed in their sequential order without loss of any message within a routed sequence. Chao et al. discloses a router that performs a normal, fair, and fast packet queueing algorithms for received message packets **[see Title, Abstract, col. 5, lines 41-56]**. More specifically, Chao et al. discloses that overflow messages are discarded based on QoS requirements if sufficient resources are not available **[col. 11, lines 37-53]**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the routing functionality of the generic router of Kanekar et al. with the congestion management of Chao et al. because such a modification provides the benefits of packet switched routing such as flexibility, non-specialized resources, and permit economies of scale **[col. 7, lines 21-26]**, while, at the same time, solves the problem of reserving resources within the router for a new flow at a given level of QoS **[col. 11, lines 37-39]**.

16. With regard to claim 9, Kanekar et al. does not specifically disclose that the router rejects older data in favor of more recent data and routes recent data to the output. Chao et al. discloses a router that performs a normal, fair, and fast packet queueing algorithms for received message packets **[see Title, Abstract, col. 5, lines 41-56]**. More specifically, Chao et al. discloses that overflow messages are discarded based on QoS requirements if sufficient resources are not available **[col. 11, lines 37-53]**. Another reason for packet discard is in addressing a time stamp aging problem wherein the older

data is purged, and the more recent data is routed to its destination based on QoS requirements **[col. 18, lines 28-54]**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the routing functionality of the generic router of Kanekar et al. with the congestion management of Chao et al. because such a modification provides the benefits of packet switched routing such as flexibility, non-specialized resources, and permit economies of scale **[col. 7, lines 21-26]**, while, at the same time, solves the problem of reserving resources within the router at a given level of QoS **[col. 11, lines 37-39]** while addressing the time stamp aging problem (latency).

18. With regard to claim 10, Kanekar et al. does not specifically disclose that the data rate on the route is reduced until the overflow situation is resolved, and sends a message to the data source requesting a stop in messages to enable overflow resolution. Chao et al. discloses a router that performs a normal, fair, and fast packet queueing algorithms for received message packets **[see Title, Abstract, col. 5, lines 41-56]**. More specifically, Chao et al. discloses that overflow messages are discarded based on QoS requirements if sufficient resources are not available **[col. 11, lines 37-53]**. Moreover, Chao et al. discloses congestion controlled functionality that can be delayed (interpreted by the examiner as reducing the data rate) **[col. 10, lines 45-60]**. Moreover, Chao et al. discloses router functionality with intra-network packets that control the flow of traffic for different qualities of service **[col. 6, line 61 to col. 7, line 1]**, as well as congestion control **[col. 7, line11-13]**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the routing functionality of the generic router of Kanekar et al. with the congestion management and flow control of Chao et al.

because such a modification provides the benefits of packet switched routing such as flexibility, non-specialized resources, and permit economies of scale **[col. 7, lines 21-26]**, while, at the same time, solves the problem of reserving and managing resources within the router at a given level of QoS **[col. 11, lines 37-39]** in order to reduce latency. Moreover, since the intra-network packets are used for control signaling, network management, and routing **[col. 6, lines 22-25]**, it would have been obvious to use the intra-network packets to use the congestion control packet signaling to request a stop in messaging until overflow was resolved.

19. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanekar et al. as applied to claims 1-7 and 15 above, and further in view of Simon et al. (USP 6,380,869).

20. With regard to claims 11-14, Kanekar does not specifically disclose that the data being routed is air traffic control, radar, meteorological, or flight plan data. However, Simon et al. discloses an air-traffic advisory system that provides weather and air traffic conditions about specific monitored airspaces **[see Title and Abstract]**. Specifically, Simon et al. monitors flight and weather conditions such as a weather substation information linked to the air-traffic advisory system [col. 3, lines 3-18], aircraft surveillance system that monitors the location of aircraft in a specific airspace (radar) **[col. 3, lines 19-30]**, air traffic control data including pilot advisory requests **[col. 3, lines 31-39]**, and flight plan data **[learned through historical data such that the flight plan data to select preferred flight plan data, col. 5, lines 48-65]**. Thus, it would have been

obvious to one of ordinary skill in the art at the time of the invention to have combined the functionality of a router in Kanekar et al. with routing the specific data in Simon et al. so that specific data that must be routed from the specific subsystems, such as Common Traffic Advisories via Common Traffic Advisory Frequency (CTAF), Air Weather Observation Subsystems (AWOS), and Traffic and Collision and Detection (TCAD) subsystems **[col. 1, lines 18-19, col. 2, line 1, col. 4, lines 51-52]** so that this specific air traffic control data can be used by air traffic controllers and pilots alike to safely provide time-relevant information for safe aircraft flight and flight management.

Response to Arguments

21. Applicant's arguments filed February 15, 2005 have been fully considered but they are not persuasive.

22. Applicant argues the Kanekar does not recite each and every limitation of the present application and explains that the memory unit that holds the configuration file is missing from Kanekar e al. Furthermore, Applicant argues that the configuration file does not include a given set of routings between the input and output devices.

23. First, as explained in claims 1 and 15 above, it is inherent that Kanekar et al. would use a memory device in the disclosed routers to load and save the a configuration file, as well as the routing tables. Second, Applicant has stated that the configurations of the routers [as master or slave] must necessarily be different and does not include input and output devices. However, the entire point to having this redundant system is to load the

same configuration file between them so that they can have a faster switchover time in case of failover **[col. 5, line 62 to col. 6, line 20]**. Thus, it is much easier for the two redundant routers to share, for example, spanning tree protocol updates **[col. 6, lines 17-20; wherein this protocol helps map those routers that input data via input ports and where to send that data (to other routers) via the output ports]**. Furthermore, the time-savings in switchover is increased because the two routers share interfaces **[col. 5, line 67 to col. 7, line 2]**. The two master-slave routers communicate using HSRP **[col. 6, lines 21-27]**. Moreover, the shared interfaces also include specific information about the ports such what type of VLAN each port belongs to **[col. 6, lines 49-50]**. Thus, sharing the same configuration information includes information on the input and output devices **[routers]**.

24. Moreover, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which the examiner believes that the applicant relies (i.e., a learned/specific set of routings loaded from a configuration file such as a learned or last-best routing table) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Or, in the alternative, if Applicant intends that there are specific input and output devices, within a network, that the router routes data to, again, such a distinction is not claimed.

Conclusion

25. Accordingly, **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

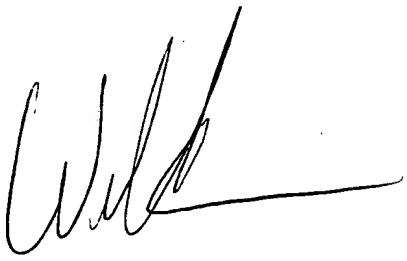
26. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A Mais whose telephone number is (571) 272-3138. The examiner can normally be reached on 6:00-4:30.

28. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

29. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 4, 2005



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